

Appl. No. : 10/542,680
Filed : July 19, 2005

AMENDMENTS TO THE CLAIMS

Please amend Claims 12-21 as follows:

Please add new Claim 22 as follows:

1-11. (Canceled).

12. **(Currently amended)** ~~An~~ A first optical connector comprising:

at least one optical guide for carrying optical radiations;

a total internal reflection surface upon at least a portion of which, in use, said radiations impinge, so that the radiation in the optical guide is reflected by said surface towards an optical element of the first connector; and

~~means enabling the connector to interlock with any other~~ a push-fit portion for attaching and aligning said first optical connector to a second optical connector which is appropriately matingly configured, said portion of said total internal reflection surface being disposed independent of said push-fit portion.

13. **(Currently amended)** ~~An~~ A first optical connector according to Claim 12, wherein the surface is such that, in use, the radiation in the optical guide may be reflected by said surface towards an optical element of the connector and may alternatively, in use, be such that its internal reflection properties may be frustrated to allow the radiation to pass across the surface.

14. **(Currently amended)** ~~An~~ A first optical connector according to Claim 12 further comprising ~~means enabling the connector to interlock with any other optical connector which is appropriately matingly configured and which wherein the second connector incorporates means which will frustrate the total internal reflection of the first said connector if and when the first connector were to be interlocked with any such other the second connector; and with the interlock-enabling means of the connector~~ push-fit portion being so operatively positioned that, with the first connector interlocked to ~~another suitable~~ the second connector as aforesaid, the total internal reflection surface of the first connector will be in sufficient proximity to the total internal reflection frustrating means of the ~~other~~ second connector as to allow the optical radiations to pass across the connection then formed by the two interlocking connectors.

15. **(Currently amended)** ~~An~~ A first optical connector according to Claim 12, wherein said optical element towards which radiation is reflected treats the radiation so that eye-damaging radiation remains within the first connector.

16. (**Currently amended**) ~~An~~ A first optical connector according to Claim 12, wherein said first connector comprises a plurality of optical guides.

17. (**Currently amended**) ~~An~~ A first optical connector according to Claim 12, wherein said push-fit portion incorporates the interlocking means allowing a connector to be first attached in a non-surface frustrating manner and then incorporates a mechanism which provides a snap-action final closure for the frustration of the surface.

18. (**Currently amended**) ~~An~~ A first optical connector according to Claim 16 further comprising additional reflection means between the optical guides and the surface.

19. (**Currently amended**) ~~An~~ A first optical connector according to Claim 16 further comprising refractive means between the optical guides and the surface which ~~are adapted to~~ change the radiation's direction as emitted from the optical guides to the direction of the radiation incident on the total internal reflection surface.

20. (**Currently amended**) ~~An~~ A first optical connector according to Claim 16, wherein the total internal reflection surface is located on at least two sides of a prism.

21. (**Currently amended**) A multiple-connector system comprising:

a first optical connector including,

at least one optical guide for carrying optical radiations,

a total internal reflection surface upon at least a portion of which, in use, said radiations impinge, so that the radiation in the optical guide is reflected by said surface towards an optical element of the first connector,

~~means enabling the connector to interlock with a push-fit portion for~~
attaching and aligning said first optical connector to another optical connector
which is appropriately matingly configured, said portion of said total internal reflection surface being disposed independent of said push-fit portion; and

one or more other optical connectors, each of which other connectors is appropriately matingly configured to ~~interlock~~ attach to and align with said first optical connector and which incorporates means which will frustrate the total internal reflection of said first connector if and when the other connector were to be ~~interlocked with~~ fully pushed against said first connector,

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wherein the ~~interlock-enabling means~~ push-fit portion of said first connector is operatively positioned so that with said first connector ~~interlocked to~~ fully pushed against said other connector as aforesaid, the total internal reflection surface of said first connector will be in sufficient proximity to the total internal reflection frustrating means of said other connector as to allow the optical radiations to pass across the connection then formed by the two ~~interlocking~~ attached connectors.

22. (New) A first optical connector according to Claim 1, wherein the push-fit portion comprises at least one alignment pin.